



# **DOT/PHMSA Update**

**Michael Conroy**

**U.S. Department of Transportation**

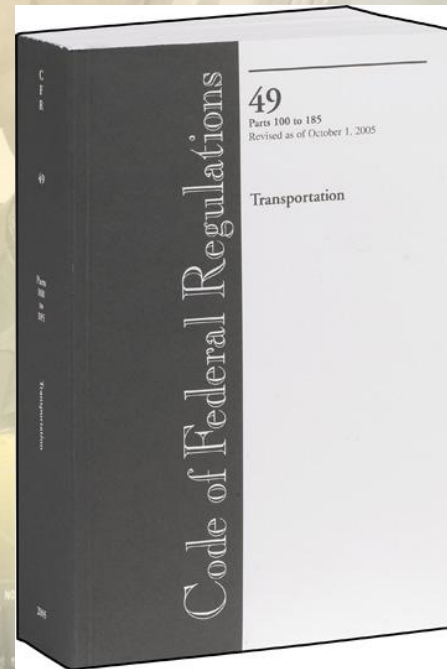
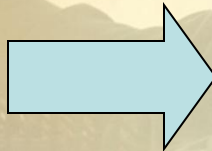
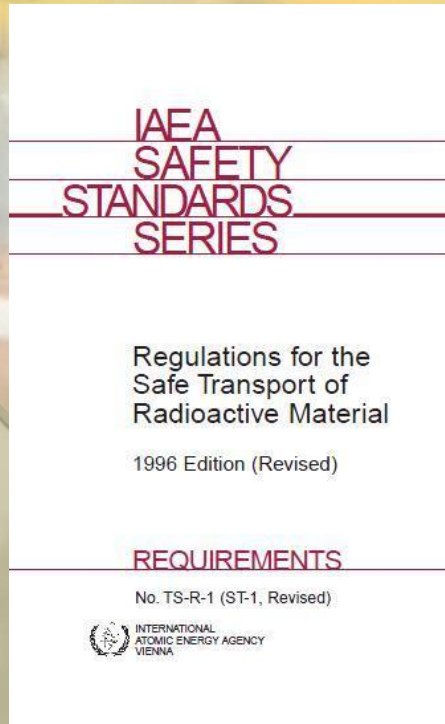
**Pipeline and Hazardous Materials Safety Administration**

**Office of Hazardous Materials Safety**

**Radioactive Materials**



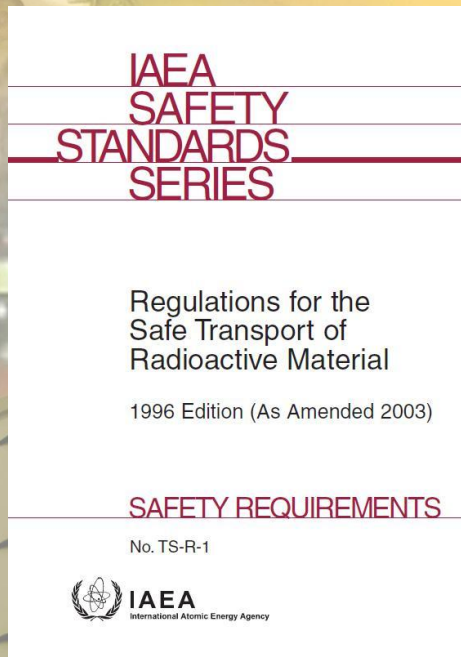
# HM-230 (1/26/04) Harmonized with 2000 Version of IAEA's 1996 Edition



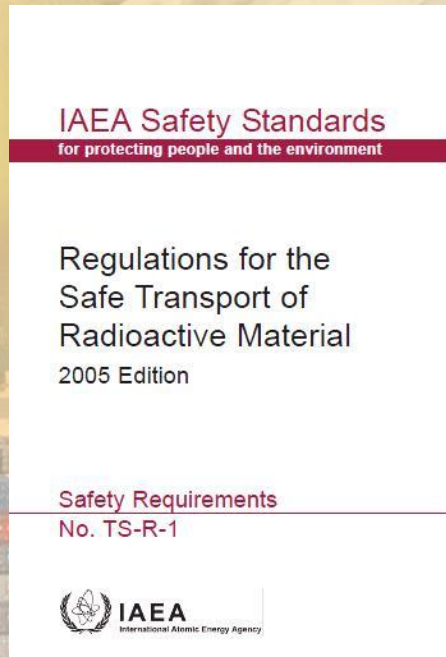




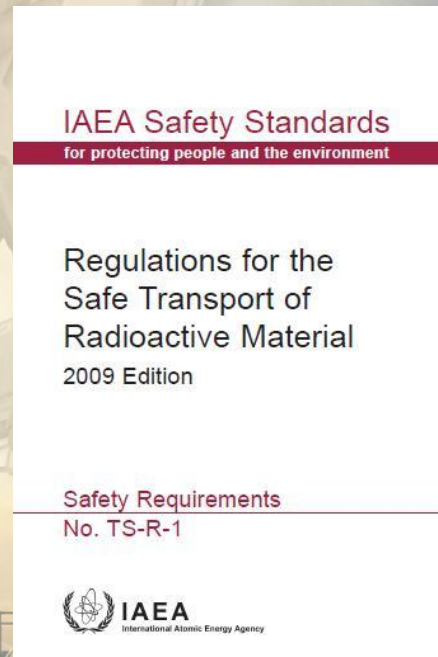
# Changes to the IAEA Regulations Since 2000



2003 Amendment



2005 Edition



2009 Edition



# Harmonization Rulemaking (HM-250)

- Harmonize with 2009 Edition of TS-R-1
- Miscellaneous Other Fixes
  - Update, clarify, correct, or provide relief from certain regulatory requirements
- DOT and NRC will both issue rulemakings
  - DOT NPRM Issued August 12, 2011
  - NRC NPRM coming soon
  - Final Rules to Follow



# HM-250 Harmonization Rule

- **Overpack Markings**
- **CSI for Conveyances**
- **Package Testing: Maximum Radiation Level**
- **Contamination Control**
- **Documentation Requirements and Retention**
- **Total Activity**
- **Exclusive Use**
- **Placarding**



# Overpack Marking

- Require marking of all overpacks of class 7 packages with the word "OVERPACK"
  - Already required for DOT 7A Type A packages
  - When the package markings are not visible



## CSIs for Conveyance

- Criticality Safety Index (CSI) for each conveyance to be the sum of the CSIs of all the packages in that conveyance





## Package Testing Max. Rad Level

- Specify that the testing of Types IP-2, IP-3 and Type A packages shall not result in “more than a 20% increase in the maximum radiation level at any external surface of the package” vs. current “a significant increase”





# Contamination Control

- Apply ALARA & Table 9 limits on non-fixed contamination to
  - External and internal surfaces of conveyances, overpacks, freight containers, tanks, and IBCs, not just external package surfaces
- Exclude internal surface contamination limits for exclusive use shipments of unpackaged material
  - Eliminates need for internal decontamination at the end of or between trips for exclusive use transport of unpackaged LSA-I and SCO-I.



## Document Retention

- Extend the retention period from 1 year to 2 years after the offerror's latest shipment, to coincide with the minimum retention period for shipping papers, for:
  - Special Form,
  - Type IP-2 Packages,
  - Type IP-3 Packages,
  - Type A Packages, and
  - UF<sub>6</sub> Packages



# Type A Documentation

- Information to be included as part of the Type A package documentation
  - An engineering drawing and description of the package showing:
    - materials of construction,
    - dimensions,
    - weight,
    - closure and closure materials (including gaskets, tape, etc.) of each item of the containment system,
    - shielding and packing materials used in normal transportation, and



## Type A Documentation (cont.)

- If the packaging is subjected to the physical tests,
  - complete documentation of testing, including
    - » date, place of test, signature of testers,
    - » a detailed description of each test performed including equipment used, and the damage to each item of the containment system resulting from the test, or
- For any other demonstration of compliance with tests
  - a detailed analysis for the contents being shipped





## Total Activity on Shipping Papers & Labels

- Activity shown should be the total maximum activity of all the radioactive contents during transport.
  - Including all parent radionuclides and daughter products,
  - Maximum activity of the radioactive contents during transport.



## Require Exclusive Use

- Additionally require conveyances carrying
  - fissile material packages,
  - unpackaged LSA-I material or SCO-I,
  - And all conveyances required by §§ 173.427, and 173.441 to operate under exclusive use conditions,
  - All closed vehicles used in accordance with § 173.443(d) to be placarded.

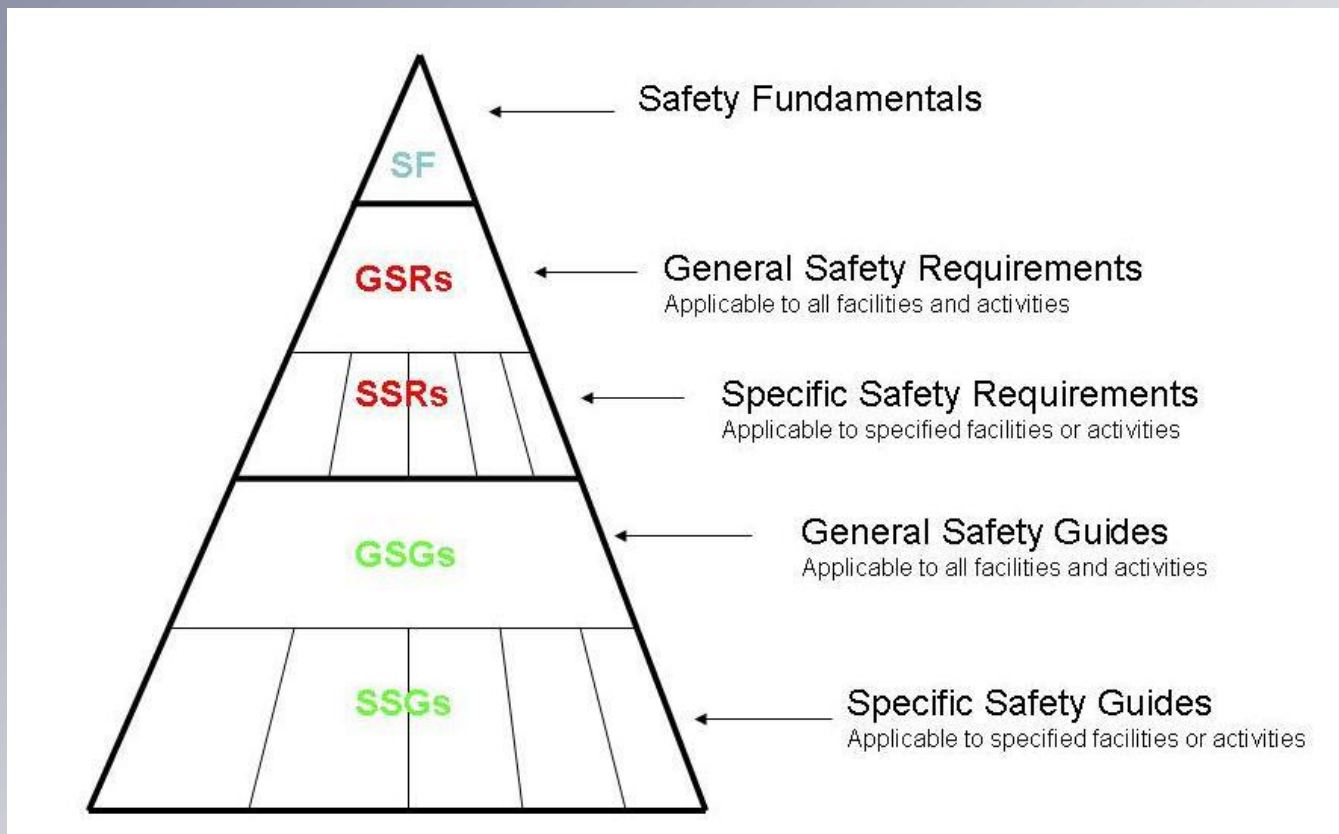


# Placards

- Additionally require placards for
  - Conveyances carrying fissile material packages,
  - Unpackaged LSA-I material or SCO-I,
  - All conveyances required by §§ 173.427, and 173.441 to operate under exclusive use conditions,
    - Unconcentrated U and Th ores
  - All closed vehicles used in accordance with § 173.443(d) to be placarded.



# New IAEA Document Terminology





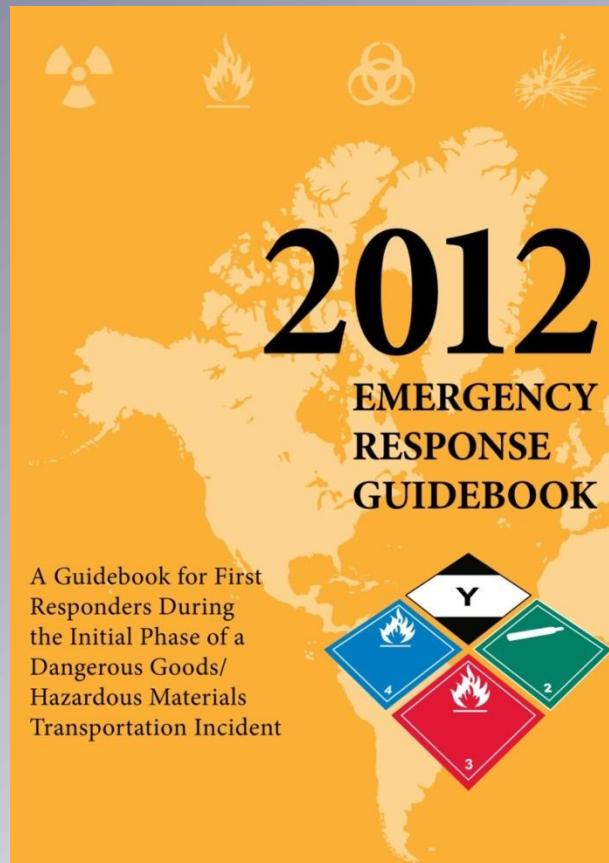


# IAEA Update

- TS-R-1 2012 Edition
  - Specific Safety Requirement (SSR) No. 6
- Available in July 2012
- Changes
  - Fissile Exceptions
  - Quality assurance = Management Systems
  - Treatment of Sample Quantities of  $UF_6$



# 2012 Emergency Response Guidebook



- Delivery the end of May
- Restructuring of general information (white pages)
- Container specific protective action distances for high volume TIH material